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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,442	08/19/2003	Judith A. Barnes	107044-0019U	4416
24267	7590	12/16/2005	EXAMINER	
CESARI AND MCKENNA, LLP 88 BLACK FALCON AVENUE BOSTON, MA 02210			RUTLAND WALLIS, MICHAEL	
			ART UNIT	PAPER NUMBER
			2835	

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,442

Applicant(s)

BARNES ET AL.

Examiner

Michael Rutland-Wallis

Art Unit

2835

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9 and 11-20 is/are rejected.
- 7) ☐ Claim(s) 3 and 10 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities:

page 10 line 11 "200is" should be changed to "200 is",
page 10 line 13 "190itself" should be changed to "190 itself",
page 10 line 30 "AC/DC/FC" should be changed to read "A/C-D/C-F/C" in order to properly reference item 100,
page 6 line 8 "an automobile lighter". As understood by the examiner this should be changed to read "automobile's cigarette lighter power outlet" or "automobile's lighter power outlet" as the lighter of the automobile would unable to provide a DC input.
page 12 line 1 "third (306)" should be changed to "third port 306",
page 7 lines 4 and 5 should be amended as application 10/084,097 is now U.S. Pat. No. 6,924,055,
page 8 lines 10-11 "device190" should be changed to "device 190"
Appropriate correction is required.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, as the applicant in claim 17 is claiming an alternative interface described in the specification page 11 lines 9-14 these elements, which produce varying potentials, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 10 in line 1 has a question mark in parenthesis it is unknown to the examiner the purpose of this question mark.

Claim 16 recites the limitation "the powering unit" in line 11. There is insufficient antecedent basis for this limitation in the claim. It suggested by the examiner to be changed to "the portable power source unit"

Claim 16 also recites the limitation "said battery-powered electronic application device" in line 9. It suggested by the examiner to be changed to "said battery powered application device"

Claim 16 further recites the limitation "an application device" in line 11. It suggested by the examiner to be changed to "said application device" or "said battery powered application device"

Claim 20 is objected to, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In line 2 of the claim "may be" renders the claim indefinite and is suggested to deleted from the claim

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 17 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to the examiner as how the modular interface

connectors produce different voltages. If the applicant intends to claim the use of "smart cables" as mentioned in page 11 line 13. A definition as to what a "smart cable" is and the means of its operation would be required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The term *application device* is used throughout the specification and in the claims while its definition maybe inferred in first two paragraphs of the specification it is not expressly defined, for clarity and in order to examine the merits of the application the examiner of record understands an application device to be any battery powered electronic device.

Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(e) as being anticipated by Dailey (U.S. Pat. No. 6,680,547). Dailey teaches a method for charging and maintaining the operation of a battery-powered electronic application device (electrical loads item 30 which may be battery powered by battery item 20), including the steps of: providing a controllable switching device (a switch item 34); providing a plurality of power sources (AC line voltage item 100, rechargeable battery item 20) each coupled to said application device via said controllable switching device, said plurality of power sources

including an AC power source (item 100) and a DC power source (item 20); and switching said controllable switching device (item 34) to select between said plurality of power sources to provide operating power to said application device or to charge said rechargeable battery.

With respect to claim 2 Dailey teaches selecting as a primary power source said AC power source (column 3 lines 60-63) and determining whether said AC power source is available (column 4 lines 30-35); and if said AC power source is available, responsively signaling said controllable switching device to select said AC power source to power said application device (column 4 lines 35-40); and if said AC power source is not available, selecting one of said (column 4 lines 40-56) rechargeable battery to power said application device.

With respect to claim 4 Dailey teaches a system wherein the primary power source is an AC line voltage however in column 3 lines 5-9. Dailey teaches the variant of a primary DC line voltage in the place of the AC line voltage could also be used. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the input of the primary power source DC in order to operate the system when a DC power line is present in the place of an AC power line.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dailey (U.S. Pat. No. 6,680,547) in view of Bliven (U.S. Pub. No. 20040175598). Dailey teaches a system wherein the primary power source is an AC line voltage. Dailey does not teach using the fuel cell as the primary power source. Bliven teaches a method for powering an application device where the primary source is a fuel cell. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the input of the primary power source the fuel cell in order to operate the system when there is not a reliable AC or DC power line for the device to connect to.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dailey (U.S. Pat. No. 6,680,547) in view of Holmes (U.S. Pat No. 6,806,678). Dailey teaches a system wherein the primary power source is an AC line voltage. Dailey does not teach using the rechargeable battery as the primary power source. Holmes teaches method where a bank of rechargeable batteries is used as the primary power source see figure 4. It would have been obvious to one of ordinary skill in the art at the time of the invention to make the input of the primary power source the rechargeable battery cell in order to operate the system when there is not a reliable AC or DC power line for the device to connect to.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dailey (U.S. Pat. No. 6,680,547) in view of Parks et al. (U.S. Pat. No. 6,504,339). Dailey teaches the battery is charged by the battery charged (item 18A). Dailey is silent on the

operation and details of the charger and simply states charger/inverter circuits are well known in the art and hence do not need to be described in detail. While it is believed by the examiner the operation of the device of claim 7 is that of the charger/inverter of Dailey, however if applicant holds this is not the operation of the Dailey. Park teaches a system where the battery charger circuit includes a monitoring circuit to determine if a charge is necessary see column 3 lines 10-33. It would have been obvious to one of ordinary skill in the art at the time of the invention to determine if the battery is need to be charged in order to not waste energy attempting to charge a fully charged battery to increase the efficiency of the system and reduce electrical power waste.

Claims 8- 16, 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (U.S. Pat. No. 6,703,722) in view of Colborn et al. (U.S. Pat. No. 6,787,259).

With respect to claim 8 Christensen an input adaptable to receive power from a DC power source (item 150); a direct oxidation fuel cell system (item 120); a means by which said system may be electrically connected to said electronic application device (connecting wires 186); a switching device (item 182) connected, said DC input and said fuel cell wherein said switching device is operable to select between a first state in which current flows through said switching device from said AC input, a second state in which current flows from said DC input and a third state in which current is drawn from said fuel cell system; and a microprocessor (items 13 and 170) coupled to said switching device and programmed to select between said AC power source, said DC power source and said fuel cell system, depending upon predetermined conditions.

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Christensen does not teach an input for receiving AC power from an external source Colborn teaches a similar system which has an input for receiving AC external power Colborn also teaches a fuel cell being direct oxidation (column 3 lines 10-20) and Colborn also teaches the use of a battery which is rechargeable. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Christensen to include a input for receiving AC power as seen in Colborn in order allow the device to be plugged into wall socket better assure continuous power.

With respect to claim 9 Christensen teaches the use of a rechargeable battery (item 141) but not it being connected to the input of the said DC source, said input from AC power source and with said fuel cell system. Christensen also teaches the microprocessor being programmed to select the rechargeable battery to power the application device if the other sources are not available (column 3 lines 20-33). Colborn teaches connecting the battery being connected to the input of the AC input and fuel cell as well as a system controller to oversee the operation of the sources and control the switching functions of the device. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Christensen to use the connection of Colborn in order to the use the battery to smooth the output voltage in order to reduce harm to the device in the case of power surges.

With respect to claim 11 Christensen teaches an embodiment of his system, which includes the use of a power combiner and conditioner (item 201), which is adapted to perform signal processing and signal conditioning to the power source

selected by said microprocessor such that the power signal is compatible with the specifications of the application device.

With respect to claim 13 Christensen teaches a system for powering and maintaining the operation of a battery see in figure 1. An input (connecting terminals 183) for receiving an external DC power source (item 150 other DC source such as solar); a direct oxidation fuel cell system (item 120); a rechargeable battery (item 141); a switching device (item 182) operable to select between, said DC power source, said fuel cell system and said rechargeable battery such that power is continuously applied to said battery powered electronic application device and a microprocessor (items 13 and 170) coupled to said switching device and programmed to select between said AC power source, said DC power source and said fuel cell system, depending upon predetermined conditions. While Christensen does not teach an input for receiving AC power from an external source Colborn teaches a similar system which has an input for receiving AC external power Colborn also teaches a fuel cell being direct oxidation (column 3 lines 10-20) and Colborn also teaches the use of a battery which is rechargeable. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Christensen to include a input for receiving AC power as seen in Colborn in order allow the device to be plugged into wall socket better assure continuous power.

With respect to claim 14 Christensen's system provides power to the load but does not teach this is done while the battery is being recharged. Colborn teaches the battery item 32 supplies current to the load while it is being recharged. In figure 2 the

battery is seen as supplying current to the load and when there is an excess of power the battery may be charged as well.

With respect to claim 16 Christensen teaches a power supply system for powering and maintaining the operation of a battery powered application device see in figure 1. An input (connecting terminals 183) for receiving an external DC power source (item 150 other DC source such as solar); a direct oxidation fuel cell system (item 120); a rechargeable battery (item 141); a switching device (item 182) operable to select between, said DC power source, said fuel cell system and said rechargeable battery such that power is continuously applied to said battery powered electronic application device; and a modular interface (in figure 2 it may be seen that the apparatus of Christensen is both portable and having modular connections to the switching circuit item 182 in figure 1) having a plurality of interfaces for receiving power connectors that couple the powering unit to an application device. While Christensen does not teach an input for receiving AC power from an external source Colborn teaches a similar system which has an input for receiving AC external power Colborn also teaches a fuel cell being direct oxidation (column 3 lines 10-20) and Colborn also teaches the use of a battery which is rechargeable. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Christensen to include a input for receiving AC power as seen in Colborn in order allow the device to be plugged into wall socket better assure continuous power.

The examiner maintains Christensen's system is portable based on a review of drawing of figure 2 showing the modular nature of system if it is maintained by applicant

Christensen does not teach the system is portable. Applicant is then referred to *In re Lindberg*, 93 USPQ 23 (CCPA 1952) for teaching of making an old device portable or moveable without producing any new and unexpected results involve only routine skill in the art

With respect to claim 18 Christensen teaches the DC power source may be from a whole host of other devices. While Christensen does not specifically call out an automobile or vehicle DC power source. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a DC power source for a vehicle DC outlet, as the DC power source in order to use the device is an automobile.

With respect to claim 19 while Colborn is silent on the AC power being from any particular source It would have been obvious to one of ordinary skill in the art at the time of the invention to use either a an electrical outlet in a building or structure, a portable generator or a power grid as seen in Dailey for example as these are the most common sources of AC power.

With respect to claim 20 Christensen as modified by Colborn teaches loads are electrical devices and loads, which may be any type of equipment and which further may be mobile phones, personal digital assistants, mobile computers, mobile DVD players, and mobile video game systems.

Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (U.S. Pat. No. 6,703,722) in view of Colborn et al. (U.S. Pat. No. 6,787,259) as applied to claim 8 above, and further in view of DeFilippis (U.S. Pub. No. 20030165720). Christensen teaches the fuel cell system comprises a housing (see in

figure 2 and 4). While Christensen is silent on the fuel cell being the direct oxidation type taught by Colborn (column 3 lines 10-20), the details of operation and components found inside of a direct oxidation fuel cell are detailed out in Colborn, DeFilippis for example teaches in extreme detail the operation and components contained within a direct oxidation fuel cell.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Christensen (U.S. Pat. No. 6,703,722) in view of Colborn et al. (U.S. Pat. No. 6,787,259) as applied to claim 12 and 14 above, and further in view of Sainsbury et al. (U.S. Pat. No. 6,104,162). Christensen neither in combination or alone teach the battery can be removed and placed in an application device after it is charged. Sainsbury teaches the battery can be removed and placed in an application device after it is charged seen in figure 1.

Allowable Subject Matter

Claim 3 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claim 3 the method steps and A, B and C are seen in Dailey however the further limitation of steps D and E are not taught by Dailey and would be allowable if rewritten in independent form.

With respect to claim 10 the further limitation to claim 9 detailing the programming of the microprocessor and charging of the battery are not taught by Christensen or Colborn alone or in combination and would be allowable if rewritten in independent form.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Leifer (U.S. Pat. No. 6,459,171) teaches a similar power system to supply and application device to that claimed in claim 1, 8 and 12

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Rutland-Wallis whose telephone number is 571-272-5921. The examiner can normally be reached on Monday-Thursday 7:30AM-6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D. Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


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